Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

Listing of the Claims:

1. (Currently Amended) A method, comprising:

~~providing~~ receiving, by a measurement system, a measurement model that comprises measurement image information and edge information;

locating, by the measurement system, a target measurement area of a sample ~~by~~ utilizing the measurement image information; ~~and~~

locating, by the measurement system, edges of structural features within the target measurement area by searching in a proximity of reference edges defined in the edge information;

performing, by the measurement system, at least one measurement of the target measurement area based on the located edges of the structural features; and ~~to provide~~

providing, by the measurement system, measurement result information to a user.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The method of claim 1 wherein the measurement model further comprises measurement information.

5. (Currently Amended) The method of claim 4 wherein the ~~stage of~~ performing of the at least one measurement is ~~responsive to~~ further based on the measurement information.

6. (Currently Amended) The method of claim 1 wherein the ~~stage of~~ performing of the at least one measurement comprises measuring at least one feature of at least one structural element within the target measurement area.

7. (Currently Amended) The method of claim 1 wherein the ~~stage of~~ performing of the at least one measurement comprises measuring a relationship between multiple structural elements within the target measurement area.

8. (Currently Amended) The method of claim 1 wherein the ~~stage of~~ locating of the target measurement area comprises: (i) locating a vicinity area that ~~comprises~~ includes the target measurement area[[;]], and (ii) locating the target measurement area by applying image processing.

9. (Currently Amended) The method of claim 1 further comprising generating the measurement image information from ~~a~~ an SEM image.

10. (Currently Amended) The method of claim 1 further comprising generating the measurement image information from CAD information.

11. (Cancelled)

12. (Currently Amended) The method of claim 1 further comprising repeating a ~~stage of generating a~~ generation of the measurement model until one or more criteria are fulfilled.

13. (Currently Amended) A ~~measurement~~ system comprising:

a processor, wherein the processor is enabled to generate or receive a measurement model comprising measurement image information and edge information, locate a target measurement area of a sample utilizing the measurement image information, locate edges of structural features within the target measurement area by searching in a proximity of reference edges defined in the edge information, perform at least one measurement of the target measurement area based on the located edges of the structural features, control a scanner, and process multiple detection signals received from a detector;

~~a~~ the scanner, in communication with the processor, wherein the scanner is enabled to scan ~~for scanning an~~ the target measurement area with a beam of charged particles; and

~~a~~ the detector, in communication with the processor, wherein the detector is positioned to receive charged particles resulting from an interaction between the target measurement area and the beam of charged particles and is enabled to provide the multiple detection signals, based on the received charged particles, to the processor. ~~and~~

~~a processor, adapted to process detection signals and to control the scanner;~~

~~whereas the measurement system is adapted to receive a measurement model that comprises measurement image information; to locate a measurement area by utilizing the~~

~~measurement image information; and to perform at least one measurement to provide measurement result information.~~

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) The ~~measurement~~ system of claim 13 wherein the measurement model further comprises measurement information.

17. (Currently Amended) The ~~measurement~~ system of claim 16 ~~whereas~~ wherein the ~~measurement system is adapted~~ processor is further enabled to perform at least one measurement ~~in response to~~ based on the measurement information.

18. (Currently Amended) The ~~measurement~~ system of claim 13 wherein the ~~measurement system is adapted~~ processor is further enabled to perform at least one measurement of at least one feature of at least one structural element within the target measurement area.

19. (Currently Amended) The ~~measurement~~ system of claim 13 wherein the ~~measurement system is adapted~~ detector is further enabled to detect ~~perform at least one measurement of~~ a relationship between multiple structural elements within the target measurement area.

20. (Currently Amended) The ~~measurement~~ system of claim 13 wherein the ~~measurement system is adapted~~ processor is further enabled to locate the target measurement area ~~by~~ utilizing a location of a vicinity area that ~~comprises~~ includes the target measurement area and image processing to locate the target measurement area~~; and by a location of the measurement area by applying image processing~~.

21. (Currently Amended) A ~~measurement~~ system comprising:

a processor, wherein the processor is enabled to generate a measurement model comprising measurement image information and edge information, locate a target measurement area of a sample utilizing the measurement image information, locate edges of structural features within the target measurement area by searching in a proximity of reference edges defined in the edge information, perform at least one measurement of the target measurement area based on the located edges of the structural features, control a scanner, and process multiple detection signals received from a detector;

~~a~~ the scanner, in communication with the processor, wherein the scanner is enabled to scan ~~for scanning an~~ the target measurement area with a beam of charged particles; and

~~a~~ the detector, in communication with the processor, wherein the detector is positioned to receive charged particles resulting from an interaction between the target measurement area and the beam of charged particles and is enabled to provide the multiple detection signals, based on the received charged particles, to the processor. ~~and~~

~~a processor, adapted to process detection signals and to control the scanner;~~

~~whereas the measurement system is adapted to receive a measurement model that comprises measurement image information; to locate a measurement area by utilizing the measurement image information; and to perform at least one measurement to provide measurement result information.~~

22. (Currently Amended) The ~~measurement~~ system of claim 21 ~~adapted~~ wherein the processor is further enabled to generate the measurement image information from ~~a~~ an SEM image.

23. (Currently Amended) The ~~measurement~~ system of claim 21 ~~adapted~~ wherein the processor is further enabled to generate the measurement image information from CAD information.

24. (Cancelled)

25. (Cancelled)

26. (Currently Amended) The ~~measurement~~ system of claim 21 wherein the measurement model further comprises measurement information.

27. (Currently Amended) The ~~measurement~~ system of claim 26 ~~whereas~~ wherein the ~~measurement system is adapted~~ processor is further enabled to perform at least one measurement ~~in response to~~ based on the measurement information.

28. (Currently Amended) The ~~measurement~~ system of claim 21 wherein the ~~measurement system is adapted~~ processor is further enabled to perform at least one measurement of at least one feature of at least one structural element within the target measurement area.

29. (Currently Amended) The ~~measurement~~ system of claim 21 wherein the ~~measurement system is adapted~~ detector is further enabled to detect ~~perform at least one measurement of~~ a relationship between multiple structural elements within the target measurement area.

30. (Currently Amended) The ~~measurement~~ system of claim 21 wherein the ~~measurement system is adapted~~ processor is further enabled to locate the target measurement area ~~by~~ utilizing a location of a vicinity area that ~~comprises~~ includes the target measurement area and image processing to locate the target measurement area~~, and by a location of the measurement area by applying image processing~~.